# COMPUTERIZED METHOD AND SYSTEM FOR FORMULATING STOCK PORTFOLIOS

## Cross-reference to Related Application

The present application claims priority from U.S. provisional application number 60/261,558 filed January 12, 2001, which is incorporated herein by reference.

## Field of the Invention

The invention relates to a method and means for establishing a stock portfolio wherein all of the stocks are selected by a computer program according to predetermined parameters and characteristics.

## Background of the Invention

In recent years, there has been an exponential rise in equity or stock investments by individual investors. Many approaches are available to the individual investor. The individual investor may independently buy or sell stocks based upon publicly available data and using the investor's own judgment. The selection of a stock involves a subjective evaluation that is not always based on solid analysis. Another approach is to invest in a mutual fund wherein all management functions are delegated to a fund manager who decides what stocks to buy or sell without any input from the individual investor. In a way, the investor is investing in the person who manages the fund. A problem is that the fund manager may or may not be successful, and the investor has no control over the manager's actions. Another type of investment is found with exchange traded funds or index funds which comprise groups of stocks that closely follow the index which they represent. These

1    may be good vehicles for an investor but are limited by the index they follow.

2    Separately managed accounts or customized managed accounts are presently in

3    favor with large accumulations of retirement accounts. With such types of accounts,

4    the investment advisor or broker recommends certain stocks for purchase and sale

5    consistent with the investor's needs. Typically they are fee based for a percentage

6    of the assets under management plus brokerage charges incurred. Because they

7    require a large investment of the broker's time, these accounts are restricted to

8    amounts over $500,000, but in some instances may decrease to $100,000 with

9    combined management.

10

11   Summary of the Invention

12   According to this invention, a stock portfolio is generated by means of a computer

13   program that employs all or some of a number of fundamental and technical

14   parameters. These parameters comprise (1) earnings growth rate past 3 years,

15   (2)earnings growth rate current year, (3) earnings growth rate estimated next year,

16   (4) earnings growth rate last quarter vs same quarter last year, (5) price earnings

17   ratio estimated next year (P/E), (6) price earnings growth ratio current year (PEG),

18   (7) price earnings growth ratio estimated (PEG), (8) sales growth rate past year, (9)

19   sales more or less than 5 year average, (10) price momentum, (11) capitalization,

20   (12) debt , (13) dividend, (14) computed Rating. The computed Rating (14) is

21   generated by calculating the sum of the parameters (1) through (13) wherein each of

22   the parameters are weighted according to the effect on the value of a stock.

23

24   To achieve the programmed calculation, a database is received from an external

25   source that provides parameters (1) through (13) on a daily basis. Each parameter is

1   assigned a weight that is consistently used for all stocks being examined.  As a

2   result, a Rating is produced for each stock and the weighted values and assigned

3   parameters are stored  in a second database together with the Rating for each stock.

4   Groups of stocks that satisfy minimal Ratings are then filtered from the database of

5   all of the externally received stocks.  Preset parameters and limits then determine

6   which stocks should be purchased to create a Portfolio and which stocks need to be

7   sold from the Portfolio.  Preferably, a Portfolio comprises a group of ten selected

8   stocks.  When one stock from the Portfolio is sold, another stock that meets BUY

9   parameters is purchased to maintain a Portfolio of ten selected stocks.  The

10  invention is not limited to a Portfolio of ten stocks but may include more or less than

11  ten stocks that meet the parameters established by this invention.

12

13  Detailed Description of the Drawings

14  The invention will be described in greater detail with reference to the drawing in

15  which:

16  FIG. 1 is a flow chart describing the process of generating a Rating for each of the

17  stocks received from an external data source;

18  FIG. 2 is a flow chart showing the general process for processing the stocks, in

19  accordance with this invention; and

20  FIG. 3 is a flow chart showing the process for generating a Portfolio with ten stocks

21  that meet the weighted parameters.

22

23  Detailed Description of the Invention

24  With reference to Fig. 1, a database is obtained from an external data source daily

25  via electronic transmission, preferably after the stock market closes each day.  The

1   database includes a large number of stocks and fundamental and technical

2   parameters associated with each of the stocks. Typically, the database lists 9000

3   selected stocks together with the fundamental and technical parameters which may

4   be examined and processed. Each parameter in the database is weighted according

5   to its significance and effect on the price of a stock. Typically, expected earnings

6   growth is weighted heavily, while momentum is weighted at a lower value. The

7   weighting process is implemented by the computer program of this invention and

8   reflects the history of the effects of the parameters on stock prices and stock values.

9   The parameters of each stock are directed through the weighting program to

10   produce a Rating for each stock. This Rating is a compilation of values of all the

11   parameters, and all of the parameters and the Rating are stored in a second

12   database. The second database with Ratings for each stock is searched for any or

13   all of the parameters and the Rating of any stock.

14

15   Fig. 2 shows another flow chart in which stocks are selected according to the

16   parameters employed by the present invention. The database of stocks and their

17   parameters are searched by a database manager search program. The parameters

18   include (S1) earnings growth rate past 3 years; (S2) earnings growth rate current

19   year; (S3) earnings growth rate estimate next year; (S4) earnings growth last quarter

20   compared to same quarter 1 year ago; (S5) P/E, estimated; (S6) P/E Growth,

21   current; (S7) P/E Growth, estimated; (S8) sales growth past 12 months; (S9)

22   difference between sales growth rate from the previous 3 years to the last year;

23   (S10) price momentum; (S11) capitalization; (S12) debt; (S13) dividend; and (S14)

24   Rating.

25

1    Using the parameters (S1) through (S14), "BUY" parameters are set and limits of

2    the "BUY" parameters that cannot be exceeded are set by the program. Whenever

3    the preset parameters for a "BUY" are met, an indication or notice is provided to

4    BUY. This indication is transmitted and provided by screen or computer monitor or

5    by e-mail. In the "SELL" program, the limits are set for each parameter at either a

6    percentage or a specific value that must be exceeded before the "SELL" program

7    indicates a "SELL" alert. The set percentage is applied to the value at which a

8    particular stock was purchased. Whenever any of these percentage limit parameters

9    are met, an indication is given to sell the stock. Alternatively, a specific value may

10   be set for a purchased stock to initiate a "SELL" alert. The percentages or the

11   specific values are determined by the user or administrator. In effect, stocks that

12   reach the BUY parameters are bought and are held until a stock exceeds the set

13   percentage limit or specific value at which time the stock is sold.

14

15   With respect to Fig. 3 which is a flow chart of a portfolios operation, a plurality of

16   stocks are selected by the program to establish a Portfolio. Each Portfolio includes

17   stocks that meet any or all of the parameters that fit investment goals of the

18   individual investor, the broker or a fund manager. The program serves to sell stocks

19   when they reach preset limits as defined by the program. In a specific

20   implementation of the invention, a Portfolio of ten best stocks are selected from an

21   Autoportfolio established automatically by the program. The Portfolio of ten stocks

22   may be selected for aggressive growth, value growth or value and income. Each

23   Portfolio of ten stocks is followed on a daily basis by the program. When a stock of

24   the Portfolio falls out of the limits of the selected parameters, it is removed from the

25   Portfolio listing and replaced by another stock which meets the parameters of the

1    program. The broker or fund manager or individual inventor is thereby alerted to

2    sell and buy stocks to maintain an active Portfolio.

3

4    The amount to be invested is divided between one or more of the various types of

5    portfolios to allocate the risk for the inventor. Each Portfolio is always available

6    and visible at all times on the web site of the broker or investment advisor. The

7    broker or advisor can produce a Portfolio using all or some of the parameters

8    selected from those parameters delineated in the program.

9

10   In practice, each client is assigned a purchase and sale page that shows the amount

11   invested in each Portfolio and the value of the Portfolio. In addition, a transaction

12   page shows the details of the number of shares of each stock owned by the client

13   and the present value and date of purchase of sale. This page is obtainable by the

14   broker electronically or by a written report.

15

16   The searches may be customized by the broker, advisor or client to use only

17   selected ones of the parameters. In addition, Portfolios can be generated using a set

18   of parameters listed in a previous search. The starting date of the Portfolio is

19   entered and each transaction is shown for stocks that meet or have met the

20   parameters used for evaluation. When a stock falls out of the parameter

21   requirements, the date of such fallout and the gain or loss at the date is shown.

22   When a new stock falls within the parameters of the system, the date of entry is

23   shown. By use of this system, actual past transactions of selected stocks may be

24   observed to learn about past performance.

25

1    An example of the determination of weighting for each of the parameters and

2    calculation of the Rating for each stock follows:

3

4                           CALCULATION OF RATING

5

6                                                      Example

7    $S1$ = EARNINGS GROWTH RATE PAST 3 YEARS

8        Growth rate is divided by 4 -    if 20%    20% x 100/4=    5

9

10   $S2$ = EARNINGS GROWTH RATE CURRENT YEAR

11        Growth rate is divided by 4 -    if 20%    40% x 100/4=    10

12

13

14   $S3$ = EARNINGS GROWTH RATE ESTIMATE NEXT YEAR

15        Growth rate times 5        if 30% x 100 x 5    150

16

17   $S4$ = EARNINGS GROWTH LAST QUARTER VS SAME QTR 1 YR AGO

18        Growth rate is divided by 2 -    if 30%    30/2=    15

19

20   $S5$ = P/E - ESTIMATED - 40

21        If P/E ratio is neg no rating possible

22        Otherwise the P/E is subtracted from 40 and that number is used

23        For example if P/E is 15, 40 - 15 -25    25

24

25   $S6$ = P/E G - current - 1.5 (price/earnings growth)

1   (1.5 - the current P/E G)

2       If neg. - it is not used and no calculation is possible

3       e.g. if P/E G = 1       1.5 minus 1 = 5                           .5

4

5   S7 = P/E G - ESTIMATED - 1.5

6       (1.5 - the current P/E G) *5

7       If PEG = 1       .5 x 5 = 2.5                                      2.5

8

9   S8 = SALES GROWTH PAST 12 MONTHS                         e.g.   4

10      (sales growth percent *100) /2.5

11

12  S9 = SALES MORE OR LESS THAN 5 YR AVERAGE

13      (sales growth percent past 12 mo - 3 yr average *100 /2.5   e.g.   5

14

15  S10=PRICE MOMENTUM - 100

16      (price momentum - 100) /2

17      e.g. if 150 = 150 - 100 divided by 2 = 25                         25

18

19  S11=CAPITALIZATION (BILLIONS)

20      1 billion = 1                                                     1

21

22  S12=DEPT

23      Minus 1 point for each 10% debt       (e.g. if 10% debt)        -10

24

25  S13=DIVIDEND

1  Dividends * 1000    e.g. if 2% dividend = .02 x 1000                    20

2                                                                         ——

3  S14=RATING

4        SUM S1: S13                                                      253

5

6

7  Thus the Rating for a particular stock that meets the above parameters is "253".

8

9  The application of the parameters to a particular stock, Textron, Inc. (TXT) is

10  presented as an example below.

11

12                    EXAMPLE OF ASSIGNED VALUES

13

14  Name                                                Textron, Inc.

15

16  Ticker Symbol                                       TXT

17

18  Date                                                28-Sep-2001

19

20  Current Price Per Share                             32.80

21

22  Principal Business                                  Aerosp & electron/spec

23                                                      Consum/mach tool/outdr

24

25  Earnings Growth Rate Past 3 years                   -24%

| | | |
|---|---|---|
| 1 | Earnings Growth Rate Current Year | 104% |
| 2 | | |
| 3 | Earnings Growth Rate Estimated Next Year | 15% |
| 4 | | |
| 5 | Earnings Growth Rate Last Qtr. Vs Same Qtr. Last Year | -30% |
| 6 | | |
| 7 | Price Earnings Ratio Current (P/E) | 8.48 |
| 8 | | |
| 9 | Price Earnings Ratio Estimated Next Year (P/E) | 7.35 |
| 10 | | |
| 11 | Price Earnings Growth Ratio Current Year (P/E G) | 0.08 |
| 12 | | |
| 13 | Price Earnings Growth Ratio Estimated Next Year (P/E G) | 0.48 |
| 14 | | |
| 15 | Sales Growth Rate Current Year | 4% |
| 16 | | |
| 17 | Sales Growth Rate Past Year | 8% |
| 18 | | |
| 19 | Price Momentum | 70.00 |
| 20 | | |
| 21 | Capitalization | 4.63 billions |
| 22 | | |
| 23 | Debt Percent | 189% |
| 24 | | |
| 25 | Dividend | 4% |

Rating                                                           150.98

In an implementation of the invention, a generated Portfolio includes one share of
each selected stock. The stocks are monitored daily by computer programs to alert
the broker, advisor or investor whether a stock is to be retained, sold or a new stock
is to be added to the Portfolio. Multiple units of each Portfolio are purchased in
accordance with the total amount to be invested. Different categories of Portfolios
may be purchased for each investor to achieve the best risk benefit balance.

It should be understood that all or only some of the parameters defined herein may
be selected for generating a Portfolio. Also, the Rating parameter need not be
included with other parameters selected by the user of the program. Furthermore,
other parameters, such as cash flow, book value and profit margin may be used in
conjunction with some or all of the parameters set forth herein.